KOLAR Document ID: 1410678

Confidentiality Requested:
☐ Yes ☑ No

KANSAS CORPORATION COMMISSION
OIL & GAS CONSERVATION DIVISION

Form ACO-1
January 2018
Form must be Typed
Form must be Signed
All blanks must be Filled

WELL COMPLETION FORM
WELL HISTORY - DESCRIPTION OF WELL & LEASE

OPERATOR: License # 32331
Name: DK Operating Inc.
Address 1: 621 BENTON ST.
Address 2:
City: JETMORE State: KS Zip: 67854 + __ __ __ __
Contact Person: Daniel L King
Phone: (620) 357-8811
CONTRACTOR: License # 5123
Name: Pickrell Drilling Company, Inc.
Wellsite Geologist: Marc Downing
Purchaser:

Designate Type of Completion:
☑ New Well ☐ Re-Entry ☐ Workover
☑ Oil ☐ WSW ☐ SWD
☐ Gas ☐ DH ☐ EOR
☐ OG ☐ GSW
☐ CM *(Coal Bed Methane)*
☐ Cathodic ☐ Other *(Core, Expl., etc.)*:

If Workover/Re-entry: Old Well Info as follows:
Operator:
Well Name:
Original Comp. Date: Original Total Depth:
☐ Deepening ☐ Re-perf. ☐ Conv. to EOR ☐ Conv. to SWD
☐ Plug Back ☐ Liner ☐ Conv. to GSW ☐ Conv. to Producer

☐ Commingled Permit #:
☐ Dual Completion Permit #:
☐ SWD Permit #:
☐ EOR Permit #:
☐ GSW Permit #:

04/27/2018 Spud Date or Recompletion Date
05/03/2018 Date Reached TD
05/24/2018 Completion Date or Recompletion Date

API No.: 15-135-26003-00-00
Spot Description: 44'S&41'E of C N2 N2 NW4
SW - NW - NE - NW Sec. 13 Twp. 20 S. R. 23 ☐ East ☑ West
374 Feet from ☑ North / ☐ South Line of Section
1361 Feet from ☐ East / ☑ West Line of Section
Footages Calculated from Nearest Outside Section Corner:
☐ NE ☑ NW ☐ SE ☐ SW
GPS Location: Lat: *(e.g. xx.xxxxx)* , Long: *(e.g. -xxx.xxxxx)*
Datum: ☐ NAD27 ☐ NAD83 ☐ WGS84
County: Ness
Lease Name: VW Well #: 3-13
Field Name:
Producing Formation: Mississipi
Elevation: Ground: 2218 Kelly Bushing: 2225
Total Vertical Depth: 4359 Plug Back Total Depth:
Amount of Surface Pipe Set and Cemented at: 219 Feet
Multiple Stage Cementing Collar Used? ☑ Yes ☐ No
If yes, show depth set: 1466 Feet
If Alternate II completion, cement circulated from:
feet depth to: w/ sx cmt.

Drilling Fluid Management Plan
(Data must be collected from the Reserve Pit)
Chloride content: 41000 ppm Fluid volume: 1000 bbls
Dewatering method used: Evaporated
Location of fluid disposal if hauled offsite:
Operator Name:
Lease Name: License #:
Quarter Sec. Twp. S. R. ☐ East ☐ West
County: Permit #:

AFFIDAVIT
I am the affiant and I hereby certify that all requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

Submitted Electronically

KCC Office Use ONLY
☐ **Confidentiality Requested**
Date:
☐ **Confidential Release Date:**
☐ **Wireline Log Received** ☑ **Drill Stem Tests Received**
☑ **Geologist Report / Mud Logs Received**
☐ **UIC Distribution**
ALT ☐ **I** ☑ **II** ☐ **III** **Approved by:** Karen Ritter **Date:** 06/13/2018

Operator Name: DK Operating Inc. Lease Name: VW Well #: 3-13

Sec. 13 Twp. 20 S. R. 23 ☐ East ☑ West County: Ness

INSTRUCTIONS: Show important tops of formations penetrated. Detail all cores. Report all final copies of drill stems tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface test, along with final chart(s). Attach extra sheet if more space is needed.

Final Radioactivity Log, Final Logs run to obtain Geophysical Data and Final Electric Logs must be emailed to kcc-well-logs@kcc.ks.gov. Digital electronic log files must be submitted in LAS version 2.0 or newer AND an image file (TIFF or PDF).

Drill Stem Tests Taken *(Attach Additional Sheets)*	☑ Yes	☐ No	☐ Log Formation (Top), Depth and Datum ☐ Sample
Samples Sent to Geological Survey	☐ Yes	☑ No	Name: see attached; Top: see attached; Datum: see attached
Cores Taken	☐ Yes	☑ No	
Electric Log Run	☐ Yes	☑ No	
Geologist Report / Mud Logs	☑ Yes	☐ No	
List All E. Logs Run:			

CASING RECORD ☐ New ☑ Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs. / Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	219	common	170	2%gel 3%CC
Production	7.875	5.5	17	4359	EA-2	145	1/4 flo @ 15.5ppg

ADDITIONAL CEMENTING / SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	# Sacks Used	Type and Percent Additives
☐ Perforate ☐ Protect Casing ☐ Plug Back TD ☐ Plug Off Zone	-			
	-			

1. Did you perform a hydraulic fracturing treatment on this well? ☐ Yes ☑ No *(If No, skip questions 2 and 3)*
2. Does the volume of the total base fluid of the hydraulic fracturing treatment exceed 350,000 gallons? ☐ Yes ☐ No *(If No, skip question 3)*
3. Was the hydraulic fracturing treatment information submitted to the chemical disclosure registry? ☐ Yes ☐ No *(If No, fill out Page Three of the ACO-1)*

Date of first Production/Injection or Resumed Production/ Injection:	Producing Method: ☐ Flowing ☐ Pumping ☐ Gas Lift ☐ Other *(Explain)*

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity

DISPOSITION OF GAS:	METHOD OF COMPLETION:	PRODUCTION INTERVAL:
☐ Vented ☐ Sold ☐ Used on Lease *(If vented, Submit ACO-18.)*	☐ Open Hole ☐ Perf. ☐ Dually Comp. *(Submit ACO-5)* ☐ Commingled *(Submit ACO-4)*	Top / Bottom

Shots Per Foot	Perforation Top	Perforation Bottom	Bridge Plug Type	Bridge Plug Set At	Acid, Fracture, Shot, Cementing Squeeze Record *(Amount and Kind of Material Used)*

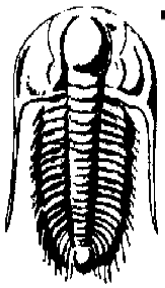
TUBING RECORD: Size: Set At: Packer At:

Mail to: KCC - Conservation Division, 266 N. Main, Suite 220, Wichita, Kansas 67202

Form	ACO1 - Well Completion
Operator	DK Operating Inc.
Well Name	VW 3-13
Doc ID	1410678

Casing

Purpose Of String	Size Hole Drilled	Size Casing Set	Weight	Setting Depth	Type Of Cement	Number of Sacks Used	Type and Percent Additives
Surface	12.25	8.625	23	219	common	170	2%gel 3%CC
Production	7.875	5.5	17	4359	EA-2	145	1/4 flo @ 15.5ppg



TRILOBITE TESTING, INC.

DRILL STEM TEST REPORT

Prepared For: **DK Operating Inc.**

621 Benton St.
Jetmore KS 67854

ATTN: Marc Downing

VW #3-13

13-20s-23w Ness,KS

Start Date: 2018.05.02 @ 23:25:00

End Date: 2018.05.03 @ 09:15:30

Job Ticket #: 63434 DST #: 1

Trilobite Testing, Inc

1515 Commerce Parkway Hays, KS 67601

ph: 785-625-4778 fax: 785-625-5620

Printed: 2018.05.03 @ 10:41:42

DRILL STEM TEST REPORT

DK Operating Inc.

621 Benton St.
Jetmore KS 67854

ATTN: Marc Dow ning

13-20s-23w Ness,KS

VW #3-13

Job Ticket: 63434 **DST#: 1**

Test Start: 2018.05.02 @ 23:25:00

GENERAL INFORMATION:

Formation: **Osage**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:29:30
Time Test Ended: 09:15:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Brannan Lonsdale/Cad
Unit No: 73

Interval: 4273.00 ft (KB) To 4360.00 ft (KB) (TVD)
Total Depth: 4360.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

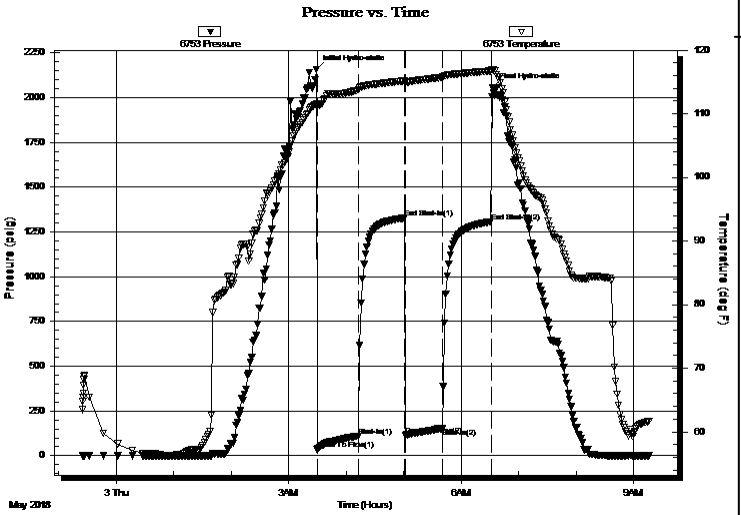
Reference Elevations: 2226.00 ft (KB)
2218.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6753 **Outside**

Press@RunDepth: 150.99 psig @ 4293.00 ft (KB)
Start Date: 2018.05.02 End Date: 2018.05.03
Start Time: 23:25:05 End Time: 09:15:30

Capacity: 8000.00 psig
Last Calib.: 2018.05.03
Time On Btm: 2018.05.03 @ 03:29:00
Time Off Btm: 2018.05.03 @ 06:33:00

TEST COMMENT: IF- 45- BOB 24 min; built to 16"
ISI- 45- No blow
FF- 45- BOB in 39 min; built to 11"
FSI- 45- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2157.79	111.54	Initial Hydro-static
1	33.76	111.28	Open To Flow (1)
44	109.71	113.73	Shut-In(1)
92	1326.95	115.13	End Shut-In(1)
93	114.45	114.87	Open To Flow (2)
132	150.99	115.72	Shut-In(2)
182	1306.71	116.68	End Shut-In(2)
184	2054.46	116.93	Final Hydro-static

Recovery

Length (ft)	Description	Volume (bbl)
122.00	GWMCO 15%G 50%O 10%W 25%M	0.60
186.00	GMCO 5%G 55%O 40%M	2.64

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

DK Operating Inc.

621 Benton St.
Jetmore KS 67854

ATTN: Marc Dow ning

13-20s-23w Ness,KS

VW #3-13

Job Ticket: 63434 **DST#: 1**

Test Start: 2018.05.02 @ 23:25:00

GENERAL INFORMATION:

Formation: **Osage**
Deviated: No Whipstock: ft (KB)
Time Tool Opened: 03:29:30
Time Test Ended: 09:15:30

Test Type: Conventional Bottom Hole (Initial)
Tester: Brannan Lonsdale/Cad
Unit No: 73

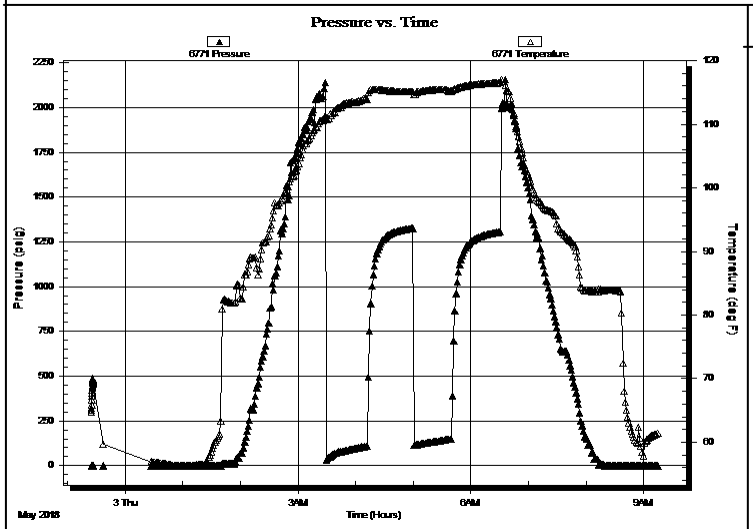
Interval: 4273.00 ft (KB) To 4360.00 ft (KB) (TVD)
Total Depth: 4360.00 ft (KB) (TVD)
Hole Diameter: 7.88 inches Hole Condition: Fair

Reference Elevations: 2226.00 ft (KB)
2218.00 ft (CF)
KB to GR/CF: 8.00 ft

Serial #: 6771 **Inside**
Press@RunDepth: psig @ 4293.00 ft (KB)
Start Date: 2018.05.02 End Date: 2018.05.03
Start Time: 23:25:01 End Time: 09:15:20

Capacity: 8000.00 psig
Last Calib.: 2018.05.03
Time On Btm:
Time Off Btm:

TEST COMMENT: IF- 45- BOB 24 min; built to 16"
ISI- 45- No blow
FF- 45- BOB in 39 min; built to 11"
FSI- 45- No blow



PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

Recovery

Length (ft)	Description	Volume (bbl)
122.00	GWMCO 15%G 50%O 10%W 25%M	0.60
186.00	GMCO 5%G 55%O 40%M	2.64

Gas Rates

	Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

DRILL STEM TEST REPORT

TOOL DIAGRAM

DK Operating Inc.

621 Benton St.
Jetmore KS 67854

ATTN: Marc Dow ning

13-20s-23w Ness,KS

VW #3-13

Job Ticket: 63434 **DST#: 1**

Test Start: 2018.05.02 @ 23:25:00

Tool Information

Drill Pipe:	Length:	4127.00 ft	Diameter:	3.82	inches	Volume:	58.50	bbl	
Heavy Wt. Pipe:	Length:	ft	Diameter:		inches	Volume:	-	bbl	
Drill Collar:	Length:	122.00 ft	Diameter:	2.25	inches	Volume:	0.60	bbl	
						Total Volume:	-	bbl	

Drill Pipe Above KB:	4.00 ft
Depth to Top Packer:	4273.00 ft
Depth to Bottom Packer:	ft
Interval betw een Packers:	87.00 ft
Tool Length:	115.00 ft
Number of Packers:	2 Diameter: 6.75 inches

Tool Weight:		2500.00 lb
Weight set on Packer:		25000.00 lb
Weight to Pull Loose:		70000.00 lb
Tool Chased		0.00 ft
String Weight:	Initial	60000.00 lb
	Final	60000.00 lb

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths	
Change Over Sub	1.00			4246.00		
Shut In Tool	5.00			4251.00		
Hydraulic tool	5.00			4256.00		
Jars	5.00			4261.00		
Safety Joint	3.00			4264.00		
Packer	5.00			4269.00	28.00	Bottom Of Top Packer
Packer	4.00			4273.00		
Stubb	1.00			4274.00		
Perforations	19.00			4293.00		
Recorder	0.00	6771	Inside	4293.00		
Recorder	0.00	6753	Outside	4293.00		
Change Over Sub	1.00			4294.00		
Drill Pipe	62.00			4356.00		
Change Over Sub	1.00			4357.00		
Bullnose	3.00			4360.00	87.00	Bottom Packers & Anchor
Total Tool Length:	**115.00**					

DRILL STEM TEST REPORT

FLUID SUMMARY

DK Operating Inc.

621 Benton St.
Jetmore KS 67854

ATTN: Marc Dow ning

13-20s-23w Ness,KS

VW #3-13

Job Ticket: 63434 **DST#: 1**

Test Start: 2018.05.02 @ 23:25:00

Mud and Cushion Information

Mud Type:	Gel Chem	Cushion Type:		Oil API:	32 deg API
Mud Weight:	9.00 lb/gal	Cushion Length:	ft	Water Salinity:	13000 ppm
Viscosity:	57.00 sec/qt	Cushion Volume:	bbl		
Water Loss:	9.59 in³	Gas Cushion Type:			
Resistivity:	ohm.m	Gas Cushion Pressure:	psig		
Salinity:	5800.00 ppm				
Filter Cake:	inches				

Recovery Information

Recovery Table

Length ft	Description	Volume bbl
122.00	GWMCO 15%G 50%O 10%W 25%M	0.600
186.00	GMCO 5%G 55%O 40%M	2.637

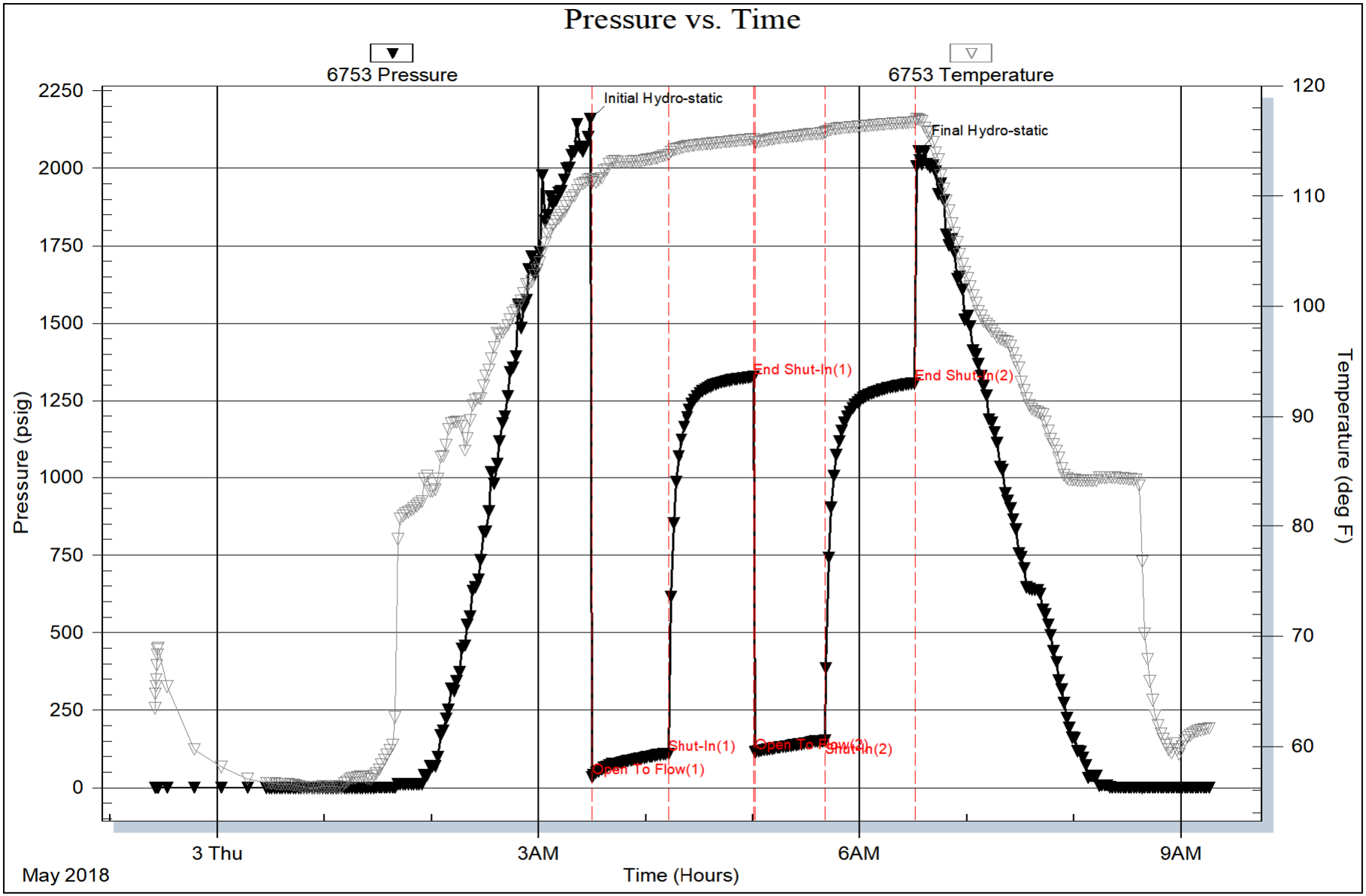
Total Length: 308.00 ft Total Volume: 3.237 bbl

Num Fluid Samples: 0 Num Gas Bombs: 0 Serial #:

Laboratory Name: Laboratory Location:

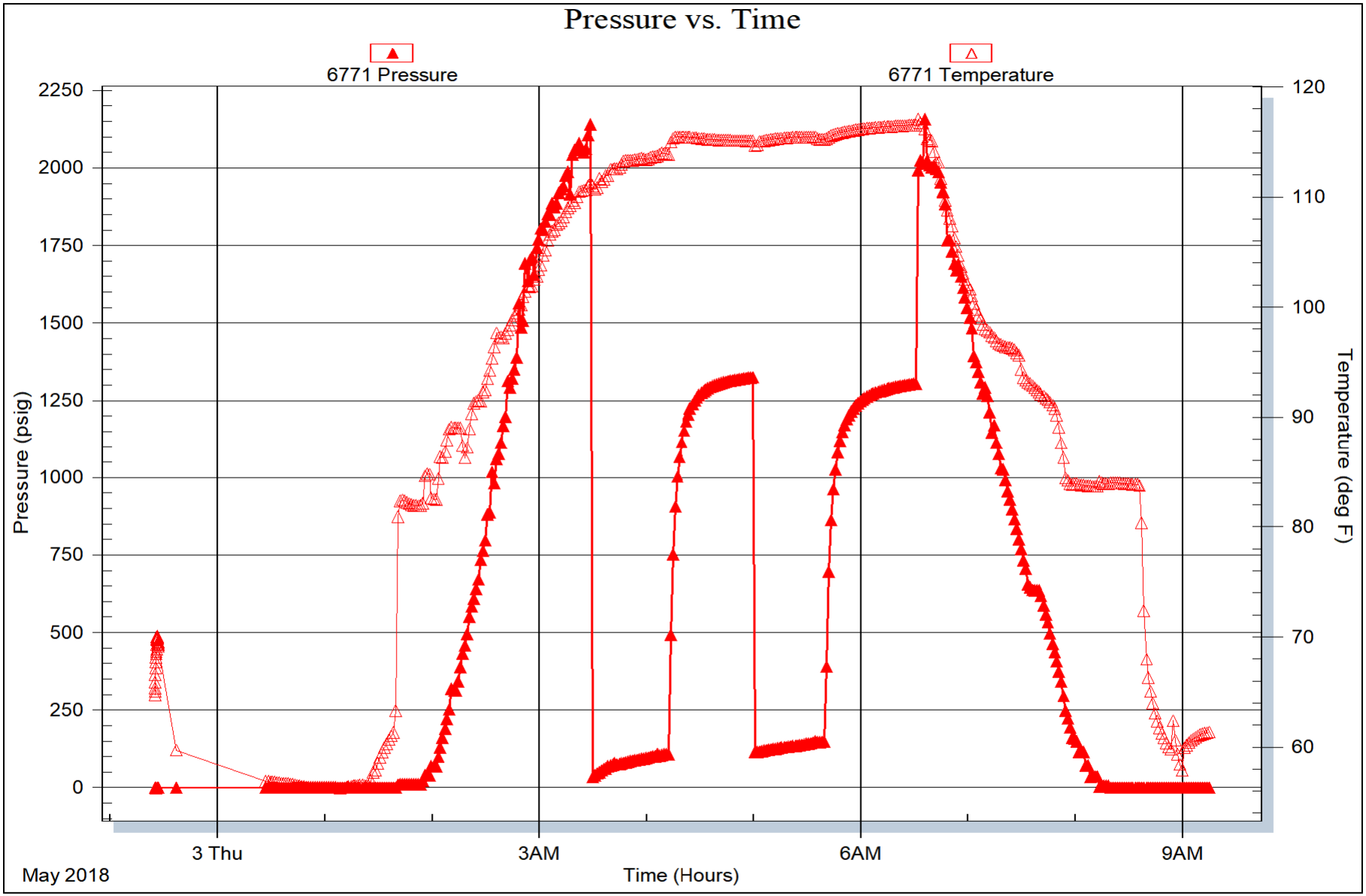
Recovery Comments: LCM-1#
RW- .62 @60 deg

Serial #: 6753 **Outside** DK Operating Inc. VW #3-13 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 63434 Printed: 2018.05.03 @ 10:41:43

Serial #: 6771 **Inside** DK Operating Inc. VW #3-13 DST Test Number: 1



Trilobite Testing, Inc Ref. No: 63434 Printed: 2018.05.03 @ 10:41:43

TRILOBITE TESTING INC.

1515 Commerce Parkway • Hays, Kansas 67601

Test Ticket

NO. 63434

Well Name & No. VW # 3-13 Test No. 1 Date 5-03-18

Company DK Operating Inc. Elevation 2226 KB 2216 GL

Address 621 Berton St. Jetmore KS 67854

Co. Rep / Geo. Marc Downing Rig Rickel Drilling Co. Inc #10

Location: Sec. 13 Twp 20S Rge. 23W Co. Ness State KS

Interval Tested 4273 - 4360 Zone Tested Osage

Anchor Length 87' Drill Pipe Run 4187 Mud Wt. 9.3

Top Packer Depth 4268 Drill Collars Run 122 Vis 57

Bottom Packer Depth 4273 Wt. Pipe Run — WL 9.6

Total Depth 4360 Chlorides 5800 ppm System LCM 1#

Blow Description IF- BOB in 24 min (16 in)

ISI - NO Blow

FF - BOB in 39 min (11 in)

FSI - NO Blow

Rec 122	Feet of GWMCO	15 %gas	50 %oil	10 %water	25 %mud	
Rec 186	Feet of GMCO	5 %gas	55 %oil	%water	40 %mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	
Rec	Feet of	%gas	%oil	%water	%mud	

Rec Total 308 BHT 117° Gravity 32 API RW .62 @ 60 °F Chlorides 13000 ppm

(A) Initial Hydrostatic 2157	☑ Test 1150	T-On Location 5/2 2225
(B) First Initial Flow 33	☑ Jars 250	T-Started 2325
(C) First Final Flow 109	☑ Safety Joint 75	T-Open 03:29
(D) Initial Shut-In 1326	☐ Circ Sub	T-Pulled 06:29
(E) Second Initial Flow 114	☐ Hourly Standby	T-Out 09:16
(F) Second Final Flow 150	☑ Mileage 166 RT 166	Comments
(G) Final Shut-In 1306	☐ Sampler	
(H) Final Hydrostatic 2054	☐ Straddle	☐ Ruined Shale Packer
	☐ Shale Packer	☐ Ruined Packer
Initial Open 45	☐ Extra Packer	☐ Extra Copies
Initial Shut-In 45	☐ Extra Recorder	Sub Total 0
Final Flow 45	☐ Day Standby	Total 1641
Final Shut-In 45	☐ Accessibility	MP/DST Disc't
	Sub Total 1641	

Approved By Our Representative Braman Lonske / Cole Lockwood

Trilobite Testing Inc. shall not be liable for damages of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements or opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.

Marc A. Downing Consulting Petroleum Geologist	Geologic Report Drilling Time and Sample Log

Operator **DK Operating Inc.**

Lease **VW** No. **3-13**

API # **15-135-26003-0000**

Field **Riverside**

Location **374' FNL & 1361' FWL**

Sec. **13** Twp. **20s** Rge. **23w**

County **Ness** State **Kansas**

Elevation

KB	2225
DF	2223
GL	2218

Casing Record

Surface
8 5/8" @ 219'
Production
5 1/2" 4359'

Electrical Surveys

None

Formation	Sample tops	Log Tops	Datum	Struct Comp
Top Anhydrite	1410		+815	+10
Base Anhydrite	1433		+792	+20?
Heebner	3670		-1445	-6
LKC	3718		-1493	-6
BKC	4041		-1816	-8
Pawnee	4164		-1939	-12
Fort Scott	4233		-2008	-11
Cherokee Sh	4257		-2032	-10
Miss/Warsaw	4320		-2095	-5
Osage	4349		-2124	-16
Total Depth	4360		-2135	

Reference Well For Structural Comparison **DK Operating - Ripple #1-12**
335' FSL & 1110' FWL Sec. 12-20s-23w

Drilling Contractor		**Pickrell Drilling, Rig #10**	
Commenced	**4-27-18**	Completed	**5-3-18**
Samples Saved From		To	**RTD**
Drilling Time Kept From		To	**RTD**
Samples Examined From		To	**RTD**
Geological Supervision From		To	**RTD**

Summary and Recommendations

Due to structural Position, DST recovery, and good sample shows, it was decided to set 5 1/2" production casing for completion.

Respectfully Submitted,

Marc A. Downing

SWIFT Services, Inc.

DATE 5-14-18 | PAGE NO. 1

OWNER	WELL NO.	LEASE	JOB TYPE	TICKET NO.
D.K. Operating	# 3-13	V.W.	Port Collar	# 31517

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	[redacted] 1200							on location 2 7/8 x 5 1/2
								P.C. - 1466'
	1400	ø	ø		✓		1000	Pressure Test *Hold*
								Open P.C.
	1410	3½	4	✓		300		Injection Rate
	1420	4	97	✓		400		mix 175 sks SMD ¼# flo @ 11.2 ppg circulate cement to surface - 20 sks
		4	8	✓		600		Displace Cement
	1450	ø	ø	✓		1000		Close P.C. Test *Hold*
								Run 4 [redacted] jts
	1510	3½	20		✓		250	Reverse Clean
								wash up truck
								* 175 sks SMD ¼# flo Total *
								* 20 sks to Pit *
	1545							Job Complete
								Thank You Dave Preston Kirby

Mud-Co / Service Mud Inc.

Operator	DK Operating		County	Ness	State	Kansas	Pump	6	x	14	x	60	SPM	Casing Program	8 5/8	" @	219	ft.
Well	VW 3-13		Location	2218SGL							GPM	8.22	BPM			" @		ft.
Contractor	Pickrell Drilling	#10	Sec	13	TWP	20S	RNG	23W	D.P.	4.5	in.	203	FT/MIN R.A.			" @		ft.
Stockpoint	Hays, Kansa	Date 4/25/2018	Engineer	Jason Whiting			Collar	6.25	in.	450	ft.	369	FT/MIN R.A.	Total Depth	4360'	ft.		

DATE	DEPTH	WEIGHT	VISCOSITY			GELS	pH	FILTRATIONFILTRATION ANALYSIS					SAND	RETORT			L.C.M.	Pump	CUMULATIVE	REMARKS AND TREATMENT
	feet	lb/gal	Sec API @ F	PV @ F	Yp	10 sec / 10 min.	Strip _ Meter _	ml API	Cake 32nds	Pres. #/BBL	Cl ppm	Ca ppm	%	Solids %	Oil %	Water %		Press. PSI	COST	
4/24	0																		0	RURT
4/28	1672	9.2	29				7.0	N/C			2,700	Hvy		6.3		93.7			1,681	Drlg.
4/30	2969	9.3	29				7.0	N/C			42M	Hvy		4.6		95.4	Tr		6,670	Drlg.
5/1	3662	8.8	52	14	13	8/31	10.5	8.8	1		4,600	20		3.4		96.6	1		8,766	Drlg. Displaced ~3400'
5/2	4239	9.3	57	15	15	20/64	9.0	9.6	2		5,800	80		6.8		93.2	1		9,919	Drlg. DST #1 @ 4360
5/3	4360	9.3	49	13	14	17/41	8.0	11.2	2		6,800	160		6.7		93.3	Tr		10,158	TOH w/DST #1
5/4	4360																		10,839	Final:
																				1 DST.
																				Logs Ok.
																				Run Casing.
																				Reserve Pit, Chl content ppm: 41,000
																				Estimated Volume: 1000 bbls

MUD-CO / SERVICE MUD INC.

100 S. Main Suite #310
Wichita, Ks. 67202
316/264-2814 Fax: 316/264-5024

DRILLING MUD RECAP

Materials	Sacks	Amount
C/S HULLS	94	1568.86
CAUSTIC SODA	10	625.20
CO-POLY-L	2	342.24
DRILL PAK	3	920.70
LIME	5	51.15
MUD-CO BARITE	30	510.00
PREMIUM GEL	355	6074.05
OSD	20	480.80
SUPER LIG	10	266.00

Materials	Sacks	Amount

	Amount
Total Mud Cost	10839.00
Trucking Cost	2062.31
Trucking Surcharge	
Taxes	
TOTAL COST	**12901.31**

QUALITY WELL SERVICE, INC.

6828

Federal Tax I.D. # 481187368
Home Office 30060 N. Hwy 281, Pratt, KS 67124
Mailing Address P.O. Box 468

Office 620-727-3410
Fax 620-672-3663

Rich's Cell 620-727-3409
Brady's Cell 620-727-6964

Date	Sec.	Twp.	Range	County	State	On Location	Finish
4-26-18	13	20S	23W	NESS	Ks	8:00 P.M	11:30

Lease VM | Well No. 3-13 | Location NESS CITY 9 W 4 1/4 E S into

Contractor Pickrell Drlg #10 | Owner

Type Job SURFACE | To Quality Well Service, Inc. You are hereby requested to rent cementing equipment and furnish cementer and helper to assist owner or contractor to do work as listed.

Hole Size 12 1/4 | T.D. 224

Csg. 8 5/8 | Depth 219'

Tbg. Size | Depth | Charge To DK OPERATING INC

Tool | Depth | Street

Cement Left in Csg. 20' | Shoe Joint | City State

Meas Line | Displace 12.7 Bbls | The above was done to satisfaction and supervision of owner agent or contractor.

Cement Amount Ordered 170 sx Common 2% GEL 3% CC

EQUIPMENT

Pumptrk 8	No.	Todd	
Bulktrk 9	No.	Dillon Rent	
Bulktrk	No.		
Pickup	No.		

Common	170 sx
Poz. Mix	
Gel.	3 sx
Calcium	10 sx
Hulls	
Salt	
Flowseal	
Kol-Seal	
Mud CLR 48	
CFL-117 or CD110 CAF 38	
Sand	
Handling	183
Mileage	37

JOB SERVICES & REMARKS

Rat Hole

Mouse Hole

Centralizers

Baskets

D/V or Port Collar

Run 5 Jt's 8 5/8 23# csg

Hook to csg & Break Circ

Pump 15 Bbl H2O AHEAD

Mix & Pump 170 sx Common 2% Gel 3% CC @ 14.8 #/gal

Disp 12.7 Bbl H2O

Close Valve 200# ps. @ 11:15

Good Circ Thru Job

Circ 5 Bbls to Pit

Thank You

Todd & Dillon

Please Call Again

FLOAT EQUIPMENT

Guide Shoe	
Centralizer	
Baskets	
AFU Inserts	
Float Shoe	
Latch Down	
LMV	37
Service Supervisor	
Pumptrk Charge	1 EA
Mileage	75 miles
Tax	
Discount	

LOG

SWIFT Services, Inc.

DATE 5-3-18 | PAGE NO. 1

CUSTOMER: D.K. Operating | WELL NO.: #3-13 | LEASE: VW | JOB TYPE: 5½" Longstring | TICKET NO.: #31506

CHART NO.	TIME	RATE (BPM)	VOLUME (BBL) (GAL)	PUMPS T	PUMPS C	PRESSURE (PSI) TUBING	PRESSURE (PSI) CASING	DESCRIPTION OF OPERATION AND MATERIALS
	2030							on location 5½" 17#
								RTD - 4360 LTD - N/A
								TP - 4364 SJ - #1 43.51
								P.C. - #60 1466' out - #96 #98 #99 #110
								Turbos - #1 #2 #3 #4 #5 #6 #7 #8 #61
								Basket - #59 #60
	2230							Start 5½" 17 # casing in well
5-4-18	0100							Drop Ball Circulate
	0200	6½	12		✓		300	Pump 500 gal Mud Flush
		6½	20		✓		300	Pump 20 bbl 1%KCL Flush
			7					Plug RH (30 sks)
	0210	4½	35		✓		200	mix 145 sks EA-2 ¼# Flo @ 15.5 ppg
								wash out Pump + Lines
								Release Top Plug
	0230	6½	0		✓		100	Start Displacement
		6½	76		✓		250	Lift Pressure
		6½	99		✓		700	Max Lift Pressure
	0245	6½	100.2		✓		1600	Land Latch Down Plug
								Release Pressure * Plug Held *
								wash up truck
	0315							Job Complete

Thank You
Dave Preston Kirby

Marc A. Downing Consulting Petroleum Geologist	Geologic Report Drilling Time and Sample Log

Operator DK Operating Inc.			Elevation
Lease VW		No. 3-13	KB 2225
API # 15-135-26003-0000			DF 2223
Field Riverside			GL 2218
Location 374' FNL & 1361' FWL			Casing Record Surface 8 5/8" @ 219' Production 5 1/2" 4359'
Sec. 13	Twp. 20s	Rge. 23w	Electrical Surveys None
County Ness	State Kansas		

Formation	Sample tops	Log Tops	Datum	Struct Comp
Top Anhydrite	1410		+815	+10
Base Anhydrite	1433		+792	+20?
Heebner	3670		-1445	-6
LKC	3718		-1493	-6
BKC	4041		-1816	-8
Pawnee	4164		-1939	-12
Fort Scott	4233		-2008	-11
Cherokee Sh	4257		-2032	-10
Miss/Warsaw	4320		-2095	-5
Osage	4349		-2124	-16
Total Depth	4360		-2135	

Reference Well For Structural Comparison DK Operating - Ripple #1-12
335' FSL & 1110' FWL Sec. 12-20s-23w

Drilling Contractor	Pickrell Drilling, Rig #10		
Commenced	4-27-18	Completed	5-3-18
Samples Saved From		To	RTD
Drilling Time Kept From		To	RTD
Samples Examined From		To	RTD
Geological Supervision From		To	RTD

Summary and Recommendations

Due to structural Position, DST recovery, and good sample shows, it was decided to set 5 1/2" production casing for completion.

Respectfully Submitted,

Marc A. Downing

ROCK TYPES

Cht
Dolprim
Lmst fw7>
shale, gry
Carbon Sh

ACCESSORIES

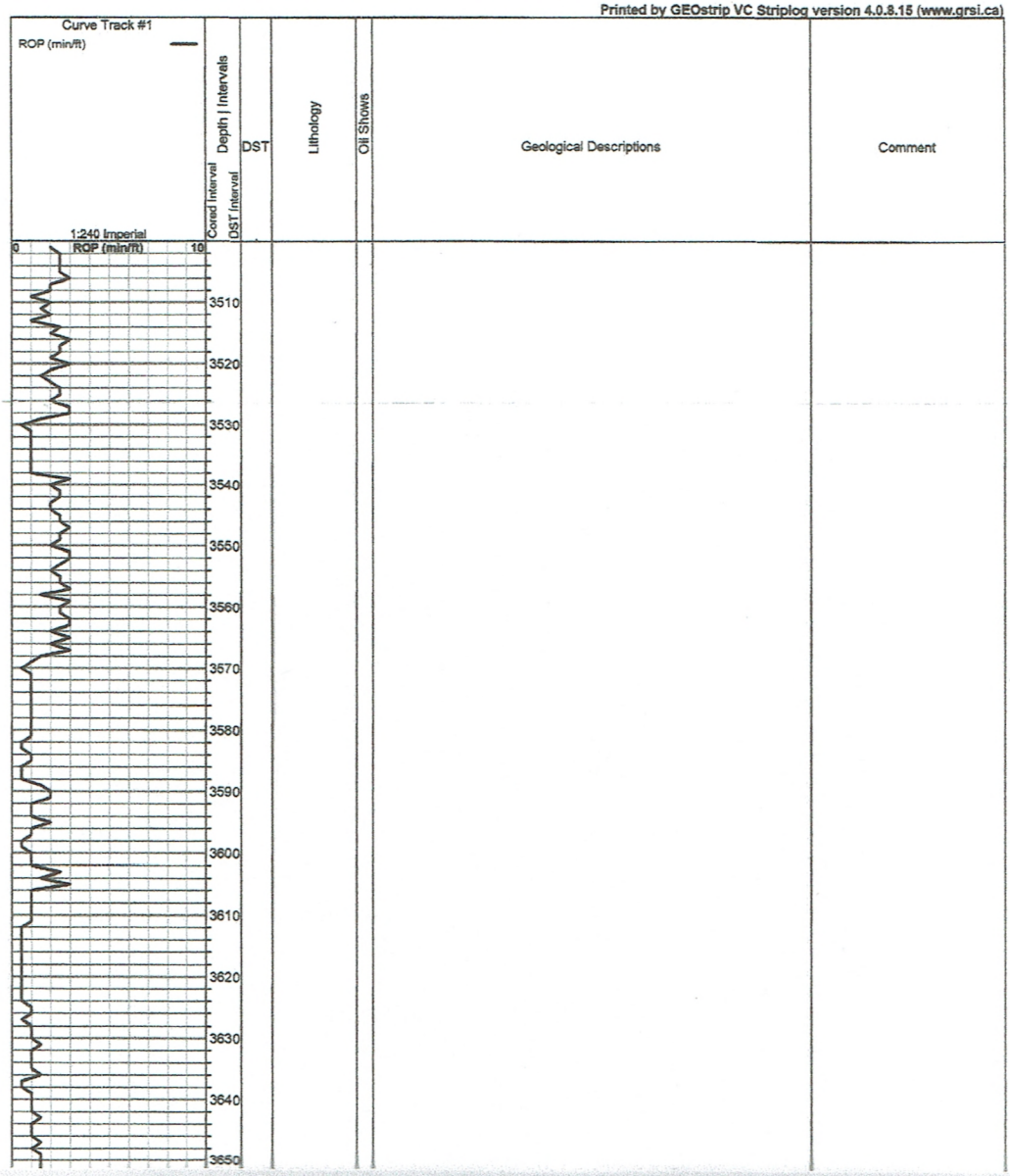
STRINGER
Dolomite
Limestone

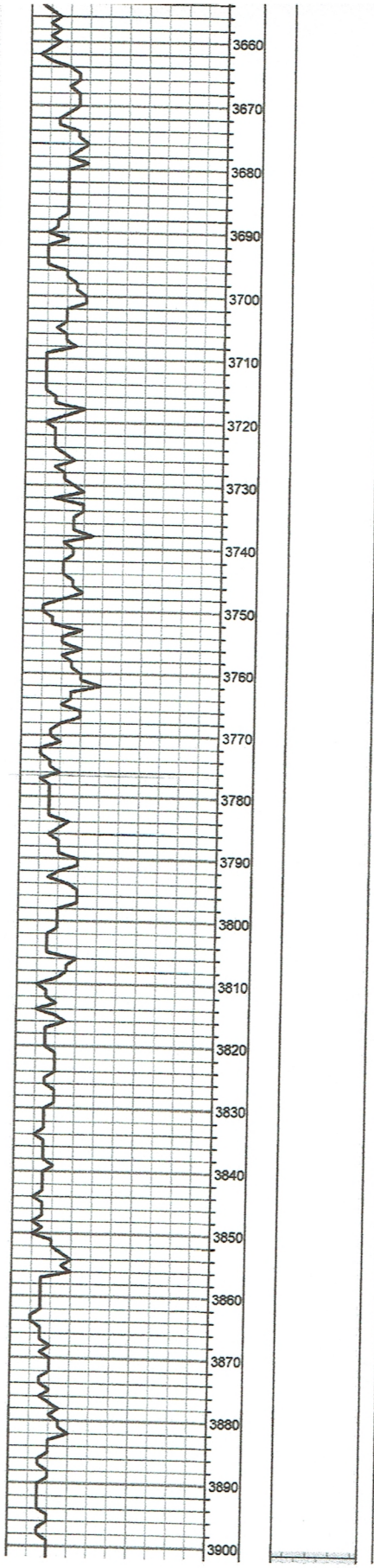
OTHER SYMBOLS

OIL SHOWS
Even Stn
Spotted Stn 50 - 75 %
Spotted Stn 25 - 50 %
Spotted Stn 1 - 25 %
Questionable Stn
Dead Oil Stn
Fluorescence

DST
DST Int
DST alt
Core
tail pipe

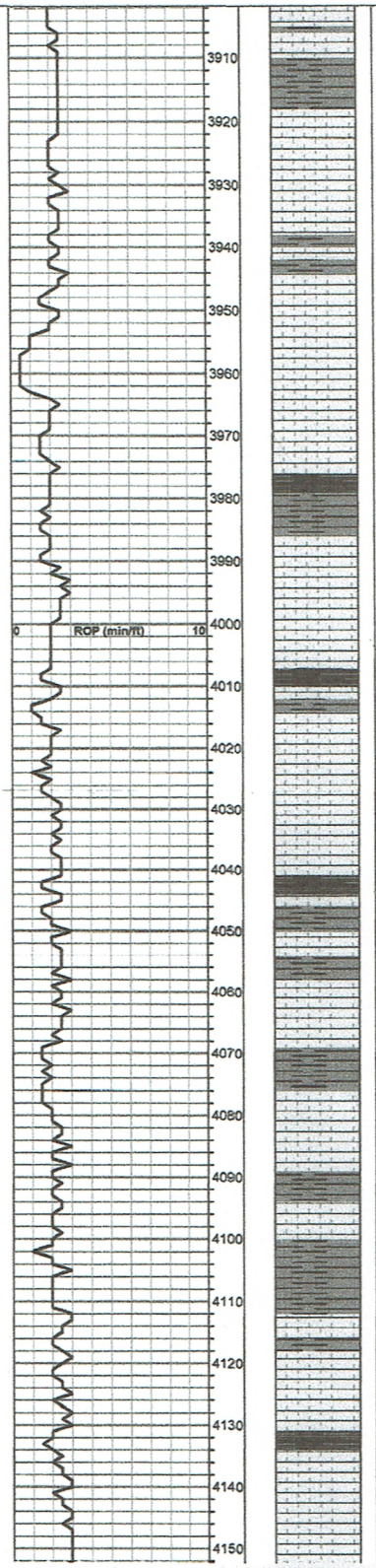
Printed by GEOstrip VC Striplog version 4.0.8.15 (www.grsi.ca)





Heebner 3670 (-1445)

LKC 3718 (-1493)



LS: wht, fn-md xln, pr por and dns.

Sh: gry

LS: wht, fn-md xln. Scat sub xln-chlky w/ some int xln por. Totally barren, no od.

LS: trng dns, pr por

Sh: gry

LS: wht, fn xln, scat fr ooc por, chlky in prt. NS.

LS: wht, gd ooc por, fr amt chlky rx. All totally barren, no od.

LS: wht, trng pr por and dns, NS.

Sh: Black Carb

Sh: gry

LS: wht, ool in prt. Mostly pr por and dns, all NS.

LS: ala, scat pr ooc por.

Sh: Black Carb

LS: wht, fn xln. Sub xln-chlky, scat shp wht cht. Trng dns, NS.

LS: mostly ala, chlky in prt, scat wht cht. All totally barren, no od.

BKC 4041 (-1816)

Sh: Black Carb

Sh: gry

Sh: gry

LS: tan-lt gry, dns w/ pr por. NS

Sh: brn and gry-lt grn, silty in prt.

LS: wht-lt tan, fn xln. Few mtld rx sltly sub xln. Trng dns, all NS.

Sh: gry

LS: tan, mostly ala.

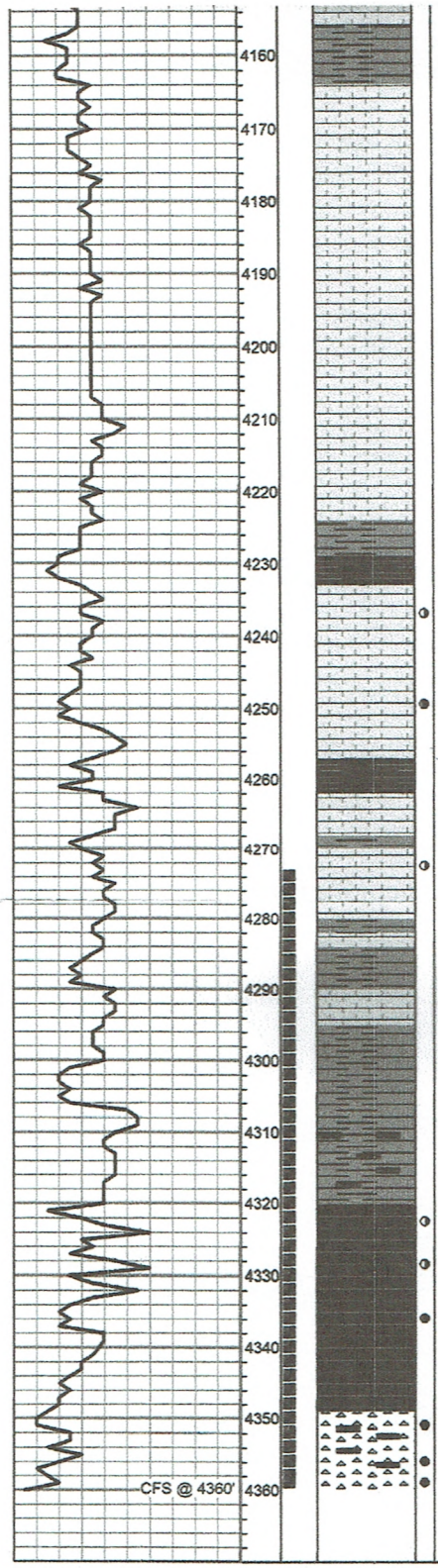
Sh: brn and gry

LS: tan, fn-md xln, dns. Scat sub xln rx, totally barren, no od.

Sh: Black Carb

LS: tan-gry, fn xln. Dns w/ no vis por and NS. Scat sub xln rx.

LS: tan, fn-md xln, v dns.



Sh: gry w/ grn

Pawnee 4164 (-1939)

LS: wht-lt tan, fn-md xln. Mosity pr por and dns, scat-fr amt sub xln rx. All NS.

LS: ala, scat vfn xln tan-brn, no vis por.

LS: ala

LS: ala, increasing amt vfn xln tan-brn. Still carrying scat wht sub xln rx. All NS.

Sh: Black Carb

Fort Scott 4233 (-2008)

LS: tan-brn, mostly pr por and dns. 1-2 rx w/ fr vug por and fr brn stn, sptd SFO, fnt od.

LS: tan-brn, md xln, foss. 2-3 rx w/ gd vug por, fr-gd sat and fr SFO, sltly gssy. Rest sub xln w/ NS. Fr od.

Cherokee Sh 4257 (-2032)

Sh: Black Carb

Sh: gry

LS: tan-wht, md xln. Scat fr stn and sptd SFO in pr vug por, lt od.

Sh: gry

LS: tan, dns

Sh: gry w/ brn

Sh: gry w/ brn, fr amt v dns fn xln LS.

Warsaw 4320 (-2095)

Dolo: tan, md xln, scat foss. Mostly pr por and dns, scat stn and sptd SFO in fr vug por, fr od.

Dolo: tan-wht, md xln, foss. Fr-gd vug por, fr-gd sat stn and SFO, gd od. Many tight rx.

Osage 4349 (-2124)

Cht: gry-wht, smokey. Mosity fresh w/ edge stn, scat-fr amt weath w/ gd stn. Fr amt tan dolo w/ gd int xln and vug por, gd sat stn, gd SFO. Gd od.

Vis: 57 Wt: 9.0

DST #1
4273-4360
45-45-45-45
I.F. - BOB 24 min / No SIB
F.F. - BOB 39 min / No SIB
IFP: 34-110
FFP: 114-151
SIP: 1327-1307
HP: 2158-2054
Rec:
186' GMCO (5% g, 55% o)
122' GWMCO (15% g, 10% w, 50% o)
BHT 117 G = 32 Chlor = 13K